Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1-24 are pending in the application, with claims 1, 15, and 24 being the independent claims. Claims 1, 15, and 24 are sought to be amended. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Allowable Subject Matter

The Examiner has indicated that claim 24 is allowable. Applicants gratefully acknowledge the indication of allowable subject matter.

Objections to the Specification

The Examiner has objected to the Abstract because it includes the title of the invention (MPEP § 608.01(b)). Applicants have made the required correction to the Abstract and respectfully request that the objection be withdrawn.

Additionally, the Examiner has objected to claim 24 because it has a spelling error ("collusion" should be "collision"). Applicants have made the required correction to claim 24 and respectfully request that the objection be withdrawn.

Rejections under 35 U.S.C. § 102

The Examiner has rejected claims 1-3, 5-16, and 18-23 under 35 U.S.C. § 102(e) as being unpatentable over U.S. Patent No. 6,621,812 to Chapman *et al.* ("Chapman"). Based on the following remarks, Applicants respectfully traverse.

Independent claim 1 generally relates to a novel way for suppressing silence in bi-directional communications between a centralized node and a plurality of local nodes in an asynchronous network environment. In particular, independent claim 1 is directed to deactivating unsolicited grant service and request polling when a silent period is detected in an upstream channel. The method of claim 1, as currently amended, includes:

> detecting a silent period in an upstream channel, said upstream channel transmitting data from a local node; and
>
> deactivating unsolicited grant service and request polling in response to said detecting a silent period.

Chapman does not teach or suggest each of the foregoing features of claim 1. For example, Chapman does not teach or suggest "deactivating unsolicited grant service and request polling in response to said detecting a silent period," as recited in claim 1.

Chapman is directed to Voice Activation Detection (VAD) implemented within the DOCSIS scheduling environment in a manner that reduces call latency. (Chapman at col. 4, lines 8-12). Chapman describes that the Cable Modem (CM) stops using the unsolicited grants given to it by the CMTS when VAD stops audio packet transmission, and that the CMTS switches to a real time polling service when it detects the unsolicited grants are not being used. (Chapman at col. 4, lines 56-63). While Chapman describes not using the unsolicited grants when audio packets are not being transmitted, Chapman does not anywhere teach or suggest "deactivating unsolicited grant service and request

polling in response to said detecting a silent period," as recited in claim 1. Rather, Chapman teaches switching from unsolicited grant service to request polling when unsolicited grants are not being used.

Indeed, the shortcomings of the conventional method used in Chapman are described in the specification of the present application:

> Silence suppression is supported by the present invention via call reactivation by using priorities in contention mini-slots. Alternatively, call reactivation is supported in DOCSIS using request polls. ***In DOCSIS, during silence periods, the unsolicited grants are stopped and request polls are sent instead.*** These polls are defined to send the reactivation request when the call goes active again. However, a voice call is silent in the order of a few seconds. It is obvious that any kind of polling results in a large amount of overhead. A way to reduce this overhead is accomplished by the present invention via its call reactivation mechanism by using priorities in contention mini-slots. Here, overhead is reduced by 1) eliminating the polls, 2) letting them share across all voice calls, and 3) less contention mini-slots are needed to transmit successfully a request as compared to the continuous polls.

See Specification, paragraph [0041] (emphasis added).

Since Chapman fails to teach or suggest each and every feature of independent claim 1, Chapman fails to anticipate claim 1. Chapman also fails to anticipate dependent claims 2, 3, and 5-14 for at least the same reasons as independent claim 1 from which they depend and further in view of their own respective features. Accordingly, the Examiner's rejection of claims 1-3 and 5-14 under 35 U.S.C. § 102(e) is traversed and Applicants respectfully request that the rejection be reconsidered and withdrawn.

Independent claim 15 generally relates to a novel way for compressing silence in bi-directional communications between a centralized node and a plurality of local nodes in an asynchronous network environment. In particular, independent claim 15 is directed to providing a reduced level of unsolicited grant service when a silent period is detected in an upstream channel. The method of claim 15, as currently amended, includes:

> providing a first level of unsolicited grant service;
>
> detecting a silent period in an upstream channel, said upstream channel transmitting data from a local node; and
>
> providing a second level of unsolicited grant service in response to said detecting a silent period, wherein said second level of unsolicited grant service is reduced as compared to said first level of unsolicited grant service.

Chapman does not teach or suggest each of the foregoing features of claim 15. For example, Chapman does not teach or suggest "providing a second level of unsolicited grant service in response to said detecting a silent period," as recited in claim 15.

As described above, Chapman is directed to VAD implemented within the DOCSIS scheduling environment in a manner that reduces call latency. (Chapman at col. 4, lines 8-12). Chapman describes that the CM *stops using* the unsolicited grants given to it by the CMTS when VAD stops audio packet transmission. (Chapman at col. 4, lines 56-61, emphasis added). Thus, Chapman does not anywhere teach or suggest "providing a second level of unsolicited grant service in response to said detecting a silent period," as recited in claim 15. As noted in the Specification in paragraph [0038] with respect to an embodiment of the present invention:

> [A]n activity detection mechanism translates to a two state call with a fixed bandwidth requirement during the active state, and a fixed, but smaller, bandwidth requirement during the silence period. The present invention refers to this as silence compression since the silence is compressed instead of being eliminated.

Since Chapman fails to teach or suggest each and every feature of independent claim 15, Chapman fails to anticipate claim 15. Chapman also fails to anticipate dependent claims 16 and 18-23 for at least the same reasons as independent claim 15 from which they depend and further in view of their own respective features.

Accordingly, the Examiner's rejection of claims 15, 16, and 18-23 under 35 U.S.C. § 102(e) is traversed and Applicants respectfully request that the rejection be reconsidered and withdrawn.

Rejections under 35 U.S.C. § 103

The Examiner has rejected claims 4 and 17 under 35 U.S.C. § 103(a) as being unpatentable over Chapman in view of U.S. Patent No. 5,897,613 to Chan. Based on the following remarks, Applicants respectfully traverse.

As described above, Chapman does not teach or suggest all of the features of independent claims 1 and 15, as amended. Furthermore, Chan does not supply the missing teachings. At a minimum, any combination of Chapman and Chan fails to teach or suggest "deactivating unsolicited grant service and request polling in response to said detecting a silent period," as recited in claim 1, and "providing a second level of unsolicited grant service in response to said detecting a silent period," as recited in claim 15.

Since neither Chapman nor Chan, alone or in combination, teaches or suggests all of the limitations of claims 1 and 15, the combination of Chapman and Chan fails to support a prima facie case of obviousness rejection of claims 4 and 17 for at least the same reasons as independent claims 1 and 15 from which they depend, respectively, and further in view of their own features. Accordingly, the Examiner's rejection of claims 4 and 17 under 35 U.S.C. § 103(a) is traversed and Applicants respectfully request that the rejection be reconsidered and withdrawn.

Information Disclosure Statements

With the Office Action, the Examiner returned page 1 but not page 2 of the Form PTO-1449 that accompanied the Information Disclosure Statement Applicants filed on May 19, 2003. Applicants respectfully request that the Examiner initial the appropriate spaces on page 2 of the Form PTO-1449 after considering the corresponding documents, and that the Examiner return the initialed form as soon as possible. Applicants have enclosed a copy of the Form PTO-1449, as originally filed on May 19, 2003, in addition to a copy of the date-stamped postcard evidencing receipt by the USPTO of the Form PTO-1449 on May 19, 2003.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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